

In the Claims:

1. (Currently Amended) A resistive touch membrane comprising a thin sheet of material for an operator interface, the membrane having integrated touchscreen and keys and further comprising:

one front surface;

~~touch regions for a display window~~ for the touchscreen of the operator interface
membrane, the display window including touch regions occupying a portion of the front surface
of the membrane;

a membrane keypad comprising depressible keys embossed on the membrane and
occupying a portion of the front surface of the membrane; and

~~a connector system containing electrical connectors extending from the touch membrane;~~

wherein each touch region is associated with a pair of electrical connectors within a the
connector system containing electrical connectors extending from the membrane, each key is
associated with a pair of electrical connectors within the connector system, and wherein each key
shares one electrical connector in common with one of the touch regions.

2. (Original) The resistive touch membrane of claim 1 wherein each key is associated
with one electrical connector which is not associated with any of the touch regions.

3. (Original) The resistive touch membrane of claim 1 wherein electrical connector
association of the touch regions and the keys is organized in a combined matrix, wherein
association of an electrical connector with a touch region or a key is determined by location of
the touch region or key within the combined matrix.

4. (Original) The resistive touch membrane of claim 1 wherein the touch regions are
divided into an A x C matrix and the keys are divided into a B x C matrix, the membrane
comprising a combined D x C matrix for the touch regions and the keys for determining
association of electrical connectors, wherein $A + B = D$.

5. (Canceled)

6. (Canceled)

7. (Currently Amended) The resistive touch membrane of claim 5 1 further comprising an embossed LED window on the front surface of the membrane ~~LED's, wherein each LED is associated with a pair of electrical connectors from the second receptacle.~~

8. (Original) The resistive touch membrane of claim 1 wherein touching a touch region completes an electrical connection between the pair of electrical connectors associated to that touch region and pressing a key completes an electrical connection between the pair of electrical connectors associated to that key.

9. (Original) The resistive touch membrane of claim 1 wherein the keys include 10 dome keys comprising function keys, navigation keys, and editing keys.

10. (Original) The resistive touch membrane of claim 1 wherein the touch regions are located within the display window, the display window including an LCD display.

11. (Original) The resistive touch membrane of claim 1 wherein each touch region and each key is associated with a distinct pair of electrical connectors not associated with any other touch region or key.

12. (Currently Amended) An operator interface comprising:

a housing; ~~and,~~

a resistive touch membrane comprising a thin sheet of material contained within the housing, the membrane having integrated touchscreen and keys and further comprising:

one front surface;

~~touch regions for~~ a display window for the touchscreen of the ~~operator interface~~ membrane, the display window including touch regions occupying a portion of the front surface of the membrane; and,

a membrane keypad comprising depressible keys embossed on the membrane and occupying a portion of the front surface of the membrane;

wherein the housing has an opening for accessing both the display window and the keypad; and the operator interface further comprises

a connector system containing electrical connectors extending from the touch membrane;

wherein each touch region is associated with a pair of electrical connectors within the connector system, each key is associated with a pair of electrical connectors within the connector system, and wherein each key shares one electrical connector in common with one of the touch regions.

13. (Original) The operator interface of claim 12 wherein each key is associated with one electrical connector which is not associated with any of the touch regions.

14. (Original) The operator interface of claim 12 wherein electrical connector association of the touch regions and the keys is organized in a combined matrix, wherein association of an electrical connector with a touch region or a key is determined by location of the touch region or key within the combined matrix.

15. (Original) The operator interface of claim 12 wherein the touch regions are divided into an A x C matrix and the keys are divided into a B x C matrix, the membrane comprising a combined D x C matrix for the touch regions and the keys for determining association of electrical connectors, wherein $A + B = D$.

16. (Original) The operator interface of claim 12 wherein the connector system includes a first receptacle and a second receptacle, each receptacle containing a subset of the electrical connectors.

17. (Original) The operator interface of claim 16 wherein each touch region is associated with one electrical connector from the first receptacle and one electrical connector from the second receptacle, and each key is associated with a pair of electrical connectors from the first receptacle.

18. (Original) The resistive touch membrane of claim 12 wherein touching a touch region completes an electrical connection between the pair of electrical connectors associated to that touch region and pressing a key completes an electrical connection between the pair of electrical connectors associated to that key.

19. (Canceled)

20. (Currently Amended) An industrial management system comprising:

at least one control device;

a programmable logic controller; and,

an operator interface communicating with the at least one control device and the programmable logic controller, the operator interface comprising:

a housing; ~~and,~~

a resistive touch membrane comprising a thin sheet of material contained within the housing, the membrane having integrated touchscreen and keys and further comprising:

one front surface;

~~touch regions for a display window~~ for the touchscreen of the operator interface membrane, the display window including touch regions occupying a portion of the front surface of the membrane; and,

a membrane keypad comprising ~~buttons~~ depressible keys embossed on the membrane and occupying a portion of the front surface of the membrane;

wherein the housing has an opening for accessing both the display window and the keypad; and the operator interface further comprises

a connector system containing electrical connectors extending from the touch membrane;

wherein each touch region is associated with a pair of electrical connectors within the connector system, each button is associated with a pair of electrical connectors within the

connector system, and wherein each button shares one electrical connector in common with one of the touch regions.

21. (Original) The industrial management system of claim 20 wherein the connector system of the resistive touch membrane is connected to the programmable logic controller.

22. (Previously Presented) The resistive touch membrane of claim 3 wherein the combined matrix includes rows and columns and a plurality of cells defined by its location within a row and a column, wherein each row is associated with one electrical connector, each column is associated with one electrical connector, each touch region is associated with a cell within the matrix, each key is associated with a cell within the matrix, and wherein the keys are associated with cells residing in rows containing cells associated with the touch regions.

b₁
23. (New) The resistive touch membrane of claim 1 wherein the front surface is uninterrupted except for a plurality of mounting holes for securing the membrane within a housing.

24. (New) The operator interface of claim 12 wherein the front surface is uninterrupted except for a plurality of mounting holes for securing the membrane within the housing.

25. (New) The industrial management system of claim 20 wherein the front surface is uninterrupted except for a plurality of mounting holes for securing the membrane within the housing.
